

Effects of vaginal progesterone suppository on uterine artery resistance in women with threatened abortion

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Introduction: Adequate levels of progesterone and efficient uteroplacental circulatory system are considered as two important factors in maintaining normal pregnancy. Conspicuously, increased vascular resistance in the uterine artery can lead to severe complications including threatened abortion by an impairment to the embryo's blood supply. This study was conducted to determine whether vaginal progesterone suppository administration effect on uterine artery resistance in women with threatened abortion.

Materials and Methods: This interventional pre-experimental study was done in Kosar hospital of Qazvin (Iran) within 2016-2017. 51 pregnant women with vaginal bleeding were entered in the study who had alive singleton fetus with 7 to 12 gestational age and closed cervix. Initially mean pulsatility index (PI) and resistance index (RI) were determined in uterine arteries on both sides by color Doppler sonography. Then, 400 mg vaginal progesterone suppository was administered for 14 days. Using color Doppler sonography, the mean PI and RI of uterine arteries were recorded again and the mean of PI and RI were evaluated before and after using vaginal progesterone suppository.

Results: The mean of RI in uterine arteries on both sides was 0.68 ± 0.07 before treatment and decreased to 0.55 ± 0.08 after treatment ($P < 0.001$). Also before intervention, the median of PI in uterine arteries on both sides was 1.17 (1.05 and 1.48) which decreased to 0.95 (0.77 and 1.14) after treatment ($P < 0.001$).

Conclusion: Vaginal progesterone suppository administration reduced uterine artery resistance by improving RI and PI index in women with threatened abortion.